ImmunoSensation² is a DFG-funded Cluster of Excellence at the University of Bonn dedicated to investigating innate immunity beyond the boundaries of classical immunology. Internationally renowned researchers of the University of Bonn Medical Faculty and Faculty of Mathematics and Natural Sciences, and the German Center for Neurodegenerative Diseases (DZNE) of the Helmholtz-Society investigate the sensing mechanisms of the innate immune system and resulting molecular mechanisms of immune activation. In a joint effort, immunologists, neuro-biologists, systems biologists and mathematicians aim to connect the status of the immune system, the metabolism and the nervous system to disease states. To do so, a broad spectrum of cutting-edge and state-of-the-art technologies ranging from high-resolution microscopy, flow cytometry, genomics, transcriptomics and epigenetics are available to investigate specific aspects of inflammation associated diseases.

Kevin Thurley, Systems Biology of Inflammation, Bridging Program Biomathematics, at the Clusters of Excellence ImmunoSensation² and Hausdorff Center for Mathematics is inviting applications for two PhD student positions (65%) in biomathematics - systems biology of inflammation

Positions are initially limited to 3 years with the possibility of extension.

The mammalian immune response depends on the interaction and collaboration of many highly individual cells. The group of Kevin Thurley uses mathematical modeling and data analysis tools to quantify and rationalize immune cell dynamics in the context of clinical manifestations such as chronic inflammation and cancer. The group is currently moving from Berlin to Bonn, and will be integrated into both the ImmunoSensation² cluster and the Hausdorff Center for Mathematics, an exceptional environment for our interdisciplinary research program.

We are recruiting 2 PhD students for data-driven modeling in two areas: innate lymphoid cells and T cells driving autoimmune organ damage, and immune cell networks in cancer immunotherapy. Both projects will be carried out in tight collaboration with wet-lab immunologists and will include first-hand data analysis as well as mathematical model development. The projects may comprise stochastic and spatial modelling techniques as well as analysis of single-cell sequencing and high-content imaging data, thus offering ample opportunity for expert training in modern systems immunology. We are looking for highly motivated, independent and committed scientists eager to make significant contributions to both fundamental and clinical research. Candidates should have a Master degree in (bio-)physics, systems biology, mathematics, computer science, or a related discipline. Good computer programming skills are required, training in immunology or cell biology is an advantage. The position requires good communication and interpersonal skills, and fluent English.

PhD students will be admitted to the Bonn International Graduate School (BIGS) Immunosciences and Infection or the BIGS Mathematics. In this structured PhD program, students gain experience with state-of-the-art technologies and become part of a vibrant scientific network and an internationally competitive scientific training program.
The salary will be according to the German salary scale TV-L (EG 13) at 65% with supplementary benefits, such as a pension plan according to VBL. A “Jobticket” (subsidized public transport) is also available. The University of Bonn is an equal opportunity employer.

Applicants should send their application in a single pdf file (max. 5 MB) including motivation letter, CV, scanned academic degrees, list of publications and the contact details of two references. Successful candidates will begin on April 1, 2021 or later.

Please send your application by email until 31.03.2021 using the job number 031_2021 to the Cluster Coordination Office

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